The documentation and process conversion measures necessary to comply with this revision shall be completed by 10 October 2000.

INCH-POUND

MIL-PRF-19500/472B
10 July 2000
SUPERSEDING
MIL-S-19500/472A (ER)
20 January 1983

PERFORMANCE SPECIFICATION

SEMICONDUCTOR DEVICE, DARLINGTON TRANSISTOR, NPN, SILICON,
POWER TYPES 2N6350, 2N6351, 2N6352 AND 2N6353
JAN, JANTX, JANTXV, JANHC AND JANKC

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the performance requirements for NPN Darlington, silicon power transistors. Three levels of product assurance are provided for each encapsulated device type as specified in MIL-PRF-19500 and two levels of product assurance are provided for each unencapsulated device type as specified in MIL-PRF-19500.

1.2 Physical dimensions. See figure 1 (TO-33) for 2N6350 and 2N6351, figure 2 (3-pin TO-66) for 2N6352 and 2N6353, and figure 3 for JANHC and JANKC (die).

1.3 Maximum ratings.

	P_T T_A = +25°C	P_T T_C = +100°C	V_{EB1}	V_{EB2}	V_{CBO1}	V_{CER}	I_C	I_C (1)	I_{B1}	T_{OP} and T_{STG}	$R_{\theta JC}$ Max
	W	W	V dc	V dc	V dc	V dc	A dc	A dc	A dc	°C	°C/W
2N6350	1.0 (2)	5 (3)	12	6	80	80	5	10	0.5	-65 to +200	20
2N6351	1.0 (2)	5 (3)	12	6	150	150	5	10	0.5	-65 to +200	20
2N6352	2.0 (4)	25 (5)	12	6	80	80	5	10	0.5	-65 to +200	4.0
2N6353	2.0 (4)	25 (5)	12	6	150	150	5	10	0.5	-65 to +200	4.0

(1) Applies for $t_p \leq 10$ ms, duty cycle ≤ 50 percent.
(2) Derate linearly 5.72 mW/°C for $T_A > 25$°C.
(3) Derate linearly 50 mW/°C for $T_C > 100$°C.
(4) Derate linearly 11.4 mW/°C for $T_A > 25$°C.
(5) Derate linearly 250 mW/°C for $T_C > 100$°C.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center, Columbus, ATTN: DSCC-VAC, P.O. Box 3990, Columbus, OH 43216-5000, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 5961

1.4 Primary electrical characteristics.

	h_{FE} 1/		$\lvert h_{fe} \rvert$ 1/	$V_{BE(ON)1}$	$V_{CE(SAT)}$		Switching	
	V_{CE} = 5 V dc I_C = 5 A dc		V_{CE} = 10 V dc I_C = 1 A dc f = 10 MHz	V_{CE} = 5 V dc I_C = 5 A dc	I_C = 5 A dc I_{B1} = 5 mA dc	I_C = 5 A dc I_{B1} = 10 mA dc	I_C = 5 A dc	
	2N6350 2N6352	2N6351 2N6353			2N6350 2N6352	2N6351 2N6353	t_{on}	t_{off}
				V dc	V dc	V dc	µs	µs
Min	2,000	1,000	5					
Max	10,000	10,000	25	2.5	1.5	2.5	0.5	1.2

1/ Pulsed, see 4.5.1.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-19500 - Semiconductor Devices, General Specification for.

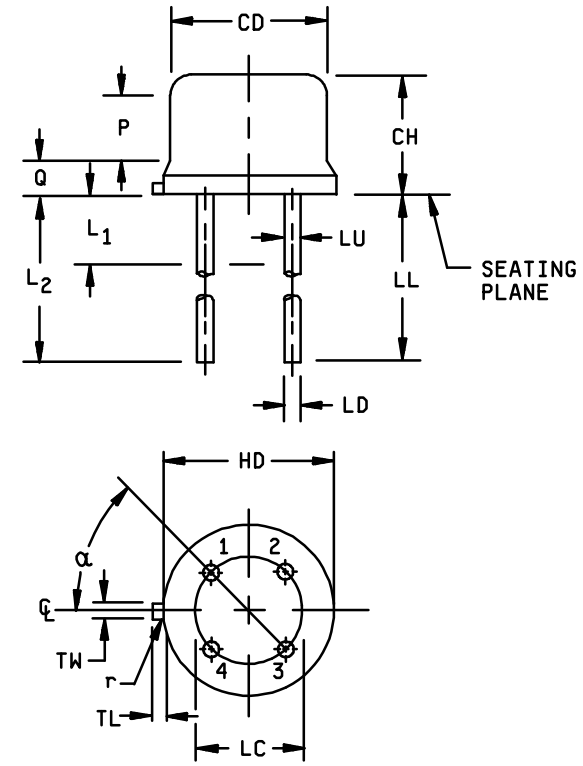
STANDARD

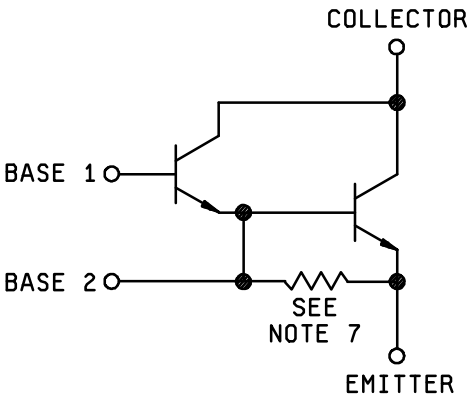
DEPARTMENT OF DEFENSE

MIL-STD-750 - Test Methods for Semiconductor Devices.

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Document Automation and Production Service (DAPS), Building 4D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.





SCHEMATIC CIRCUIT

FIGURE 1. Dimensions and configuration (T0-33).

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD	0.305	0.335	7.75	8.51	6
CH	0.184	0.260	4.67	6.60	
HD	0.335	0.370	8.51	9.40	
LC	0.200 TP		5.080 TP		7
LD	0.016	0.021	0.407	0.533	8, 9
LL	1.500	1.750	38.10	44.45	8, 9
L_1		0.050		1.27	8, 9
L_2	0.250		6.35		8, 9
LU	0.016	0.019	0.407	0.482	8, 9
TL	0.029	0.045	0.74	1.14	4
TW	0.028	0.034	0.712	0.863	3
P	0.100		2.54		6
Q		0.050		1.27	5
r		0.010		0.254	11
α	45° TP		45° TP		7

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Beyond r (radius) maximum, TW shall be held for a minimum length of 0.011 inch (0.28 mm).
4. TL measured from maximum HD.
5. Outline in this zone is not controlled.
6. CD shall not vary more than 0.010 inch (0.25 mm) in zone P. This zone is controlled for automatic handling.
7. Leads at gauge plane 0.054 + 0.001 – 0.000 inch (1.37 + 0.03 – 0.00 mm) below seating plane shall be within 0.007 inch (0.18 mm) radius of True Position (TP) at maximum material condition (MMC) relative to tab at (MMC). The device may be measured by direct methods.
8. LU applies between L_1 and L_2. LD applies between L_2 and LL minimum. Diameter is uncontrolled in L_1 and beyond LL minimum.
9. All leads.
10. Lead designation is as follows: 1 - Emitter, 2 - Base (B2), 3- Base (B1), 4 - Collector. The collector shall be connected to the case.
11. r (radius) applies to both inside corners of the tab.
12. Internal resistance (typically 750 ohms).

FIGURE 1. Dimensions and configuration (T0-33) - Continued.

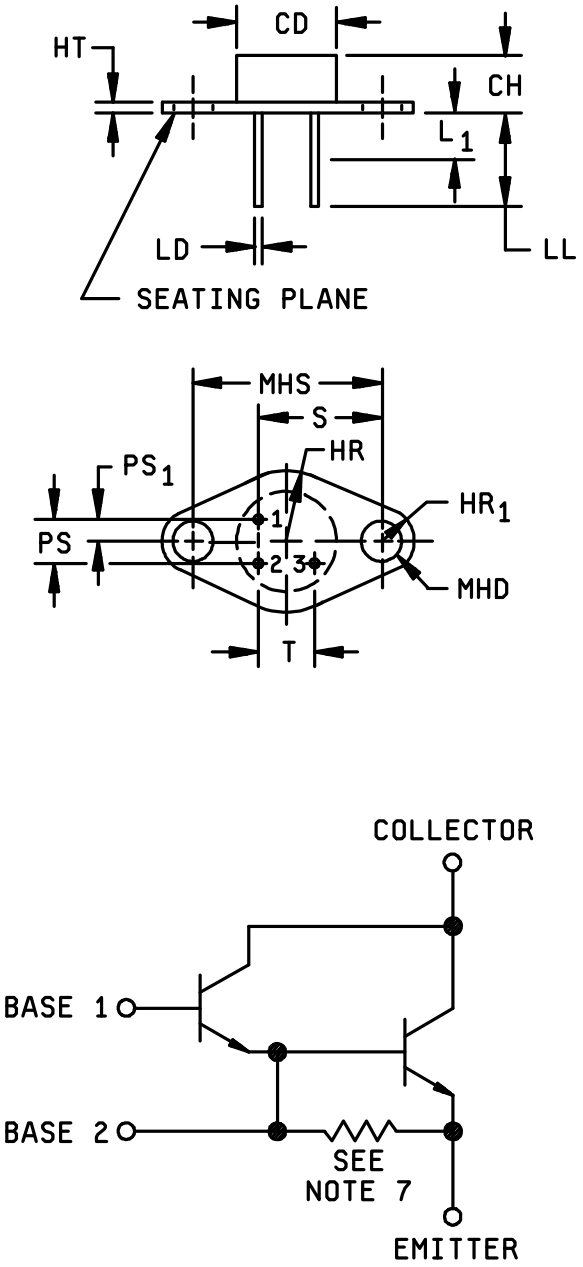
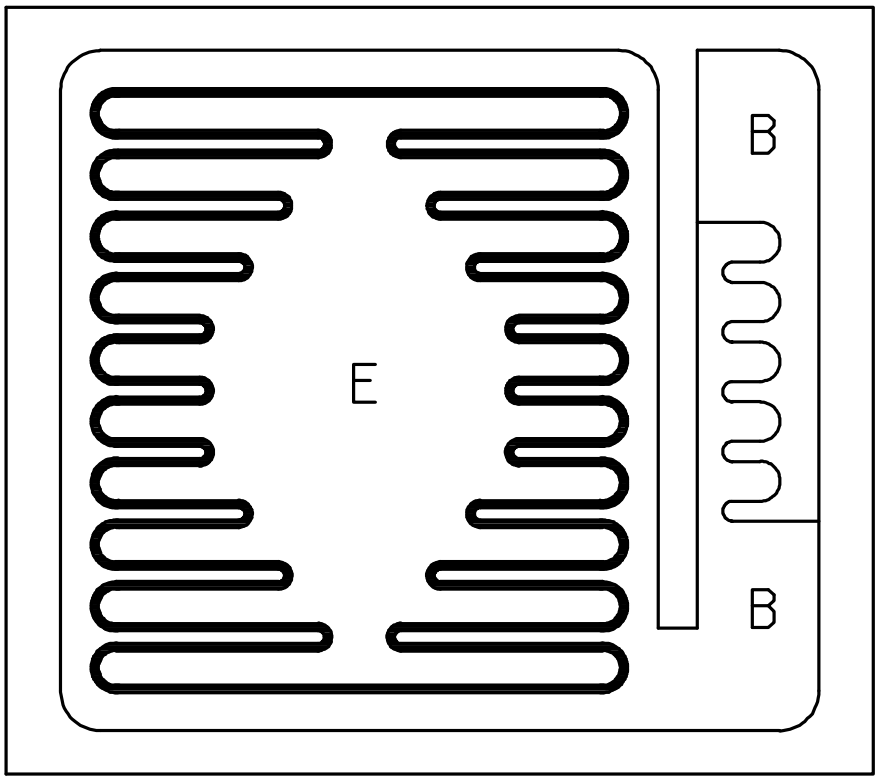


FIGURE 2. Physical dimensions for 2N6352 and 2N6353 (3-pin TO-66).

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD		0.620		15.75	
CH	0.250	0.340	6.35	8.64	
HT	0.050	0.075	1.27	1.91	4
HR		0.350		8.89	
HR_1	0.115	0.145	3.92	3.68	
LD	0.028	0.034	0.711	0.863	5
LL	0.360	0.500	9.14	12.70	5
L_1		0.050		1.27	5
MHD	0.142	0.152	3.61	3.86	
MHS	0.958	0.962	24.33	24.43	
PS	0.190	0.210	4.83	5.33	
PS_1	0.093	0.105	2.36	2.72	
S	0.570	0.590	14.48	14.99	
T	0.190	0.210	4.83	5.33	

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. The outline contour is optional.
4. Dimension does not include sealing flanges.
5. All leads.
6. Lead designation is as follows: 1 - Emitter, 2 - Base (B1), 3- Base (B2), Collector. The collector shall be connected to the case.
7. Internal resistance (typically 750 ohms).
8. Shape of capweld flange is optional and cannot extend beyond HR.

FIGURE 2. Physical dimensions for 2N6352 and 2N6353 (TO-66) - Continued.



NOTES:

1. Chip size: 87 x 100 mils ± 2 mils.
2. Chip thickness: 10 ± 1.5 mils nominal.
3. Top metal: Aluminum 30,000Å minimum, 33,000Å nominal.
4. Back metal: A. Al/Ti/Ni/Ag 12kÅ/3kÅ/7kÅ/7kÅ min.,15kÅ/5kÅ/10kÅ/10kÅ nom.
   B. Gold: 2,500Å minimum, 3,000Å nominal.
5. Backside: Collector.
6. Bonding pad: B_1 = 16 x 14 mils, B_2 = 16 x 18 mils, E = 40 x 8 mils.

FIGURE 3. JANHC and JANKC A-version die dimensions.

3. REQUIREMENTS

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-19500.

3.2 Qualification. Devices furnished under this specification shall be products that are manufactured by a manufacturer authorized by the qualifying activity for listing on the applicable qualified manufacturer's list (QML) before contract award (see 4.2 and 6.3).

3.3 Abbreviations, symbols, and definitions. Abbreviations, symbols, and definitions used herein shall be as specified in MIL-PRF-19500.

3.4 Interface requirements and physical dimensions. The interface requirements and physical dimensions shall be as specified in MIL-PRF-19500 and on figure 1 (TO-33) for 2N6350 and 2N6351, figure 2 (3-pin TO-66) for 2N6352 and 2N6353, and figure 3 for JANHC and JANKC (die) herein.

3.4.1 Lead finish. Unless otherwise specified, lead finish shall be solderable in accordance with MIL-STD-750, MIL-PRF-19500, and herein. Where a choice of lead finish or formation is desired, it shall be specified in the acquisition document (see 6.2)

3.5 Marking. Marking shall be in accordance with MIL-PRF-19500. At the option of the manufacturer, marking may be omitted from the body, but shall be retained on the initial container.

3.6 Electrical performance characteristics. Unless otherwise specified, the electrical performance characteristics are as specified in 1.3, 1.4, and table I herein.

3.7 Electrical test requirements. The electrical requirements shall be the subgroups specified in table I herein.

3.8 Workmanship. Semiconductor devices shall be processed in such a manner as to be uniform in quality and shall be free from other defects that will affect life, serviceability, or appearance.

4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. Qualification inspection (see 4.2).

b. Screening (see 4.3)

c. Conformance inspection (see 4.4).

4.2 Qualification inspection. Qualification inspection shall be in accordance with MIL-PRF-19500 and as specified herein.

4.3 Screening (JANTX and JANTXV levels only). Screening shall be in accordance with table IV of MIL-PRF-19500, and as specified herein. The following measurements shall be made in accordance with table I herein. Devices that exceed the limits of table I herein shall not be acceptable.

Screen (see table IV of MIL-PRF-19500)	Measurement
	JANTX and JANTXV levels only
11	I_{CEX1} and h_{FE1}
12	See 4.3.1
13	ΔI_{CEX1} = ± 100 percent of initial value or 20 nA dc, whichever is greater; Δh_{FE1} = ± 25 percent of initial value; subgroup 2 of table I herein.

4.3.1 Power burn-in conditions. Power burn-in conditions are as follows: T_A = +25°C;

Power shall be applied to achieve T_J = 135°C minimum and power dissipation of $P_D \geq 75$ percent of maximum rated P_T as defined in 1.3.

2N6350	V_{CE} = 60 V dc	P_T =1.0 W
2N6351	V_{CE} = 100 V dc	P_T =1.0 W
2N6352	V_{CE} = 60 V dc	P_T =2.0 W
2N6353	V_{CE} = 100 V dc	P_T =2.0 W

4.4 Conformance inspection. Conformance inspection shall be in accordance with MIL-PRF-19500 and as specified herein.

4.4.1 Group A inspection. Group A inspection shall be conducted in accordance with MIL-PRF-19500 and table I herein. Electrical measurements (end-points) shall be in accordance with table I, subgroup 2 herein.

4.4.2 Group B inspection. Group B inspection shall be conducted in accordance with the conditions specified for subgroup testing in table VIb (JAN, JANTX, and JANTXV) of MIL-PRF-19500, and as follows. Electrical measurements (end-points) shall be in accordance with table I, subgroup 2 and delta requirements shall be as specified in 4.5.2 herein.

4.4.2.1 Group B inspection, table VIb of MIL-PRF-19500.

Subgroup	Method	Condition
B3	1027	For 2N6350 and 2N6351; V_{CE} = + 40 V dc. For 2N6352 and 2N6353; V_{CE} = + 100 V dc. Power shall be applied to achieve T_J = 150°C minimum and power dissipation of $P_D \geq 75$ percent of maximum rated P_T as defined in 1.3.
B5	3151	Base 1 shorted to base 2 (see 1.3).

4.4.3 Group C inspection. Group C inspection shall be conducted in accordance with the conditions specified for subgroup testing in table VII of MIL-PRF-19500, and as follows. Electrical measurements (end points) shall be in accordance with table I, subgroup 2 and and delta requirements shall be as specified in 4.5.2 herein.

4.4.3.1 Group C inspection, table VII of MIL-PRF-19500.

Subgroup	Method	Condition
C2	2036	Test condition E for 2N6350 and 2N6351. Test condition A for 2N6352 and 2N6353, weight = 3 lbs, t = 15s.
C6	1027	For 2N6350 and 2N6351; V_{CE} = + 40 V dc. For 2N6352 and 2N6353; V_{CE} = + 100 V dc. Power shall be applied to achieve T_J = 150°C minimum and power dissipation of $P_D \geq 75$ percent of maximum rated P_T as defined in 1.3.

4.5 Methods of inspection. Methods of inspection shall be as specified in the appropriate tables and as follows.

4.5.1 Pulse measurements. Conditions for pulse measurements shall be as specified in section 4 of MIL-STD-750.

4.5.2 Delta requirements. Delta requirements shall be as specified below:

Step	Inspection (1)	MIL-STD-750		Symbol	Limit
		Method	Conditions		
1.	Forward current transfer ratio	3076	V_{CE} = 5 V dc; I_C = 5.0 mA dc; pulsed see 4.5.1, R_{B2E} = 100 ohm	Δh_{FE2}	± 25% change from initial reading.
2.	Thermal resistance (junction to case)	3151	Base 1 shorted to base 2	$R_{\theta JC}$	See 1.3

(1) The delta measurements for table VIb (JAN, JANTX and JANTXV) of MIL-PRF-19500 are subgroup 3, see table II herein, step 1.

TABLE I. Group A inspection.

Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Subgroup 1						
Visual and mechanical examination	2071					
Subgroup 2						
Collector to emitter breakdown voltage	3011	Bias condition B, I_C = 25 mA dc, Pulsed (see 4.5.1) R_{B1E} = 2.2 k ohm, R_{B2E} = 100 ohms	$V_{(BR)CER}$			
2N6350, 2N6352				80		V dc
2N6351, 2N6353				150		V dc
Emitter to base 1, breakdown voltage	3026	Bias condition D, I_E = 12 mA dc, base 2 open.	$V_{(BR)EBO1}$	12		V dc
Emitter to base 2, breakdown voltage	3026	Bias condition D, I_E = 12 mA dc, base 1 open.	$V_{(BR)EBO2}$	6		V dc
Collector to emitter cutoff current	3041	Bias condition A, V_{EB1} = 2 V dc, R_{B2E} = 100 ohms	I_{CEX1}			
2N6350, 2N6352		V_{CE} = 80 V dc			1.0	µA dc
2N6351, 2N6353		V_{CE} = 150 V dc			1.0	µA dc
Saturated voltage and resistance	3071	I_C = 5.0 A dc; R_{B2E} = 100 ohms	$V_{CE(sat)1}$			
2N6350, 2N6352		I_B = 5 mA dc, pulsed (see 4.5.1)			1.5	V dc
2N6351, 2N6353		I_B = 10 mA dc, pulsed (see 4.5.1)			2.5	V dc
Base emitter voltage (unsaturated)	3066	V_{CE} = 5 V dc, I_C = 5.0 A dc pulsed (see 4.5.1) R_{B2E} = 100 ohms	$V_{BE(on)1}$		2.5	V dc
Forward-current transfer ratio	3076	V_{CE} = 5 V dc I_C = 1.0 A dc; pulsed (see 4.5.1). R_{B2E} = 1 k ohms	h_{FE1}			
2N6350, 2N6352				2,000		
2N6351, 2N6353				1,000		

See footnote at end of table.

TABLE I. Group A inspection - Continued.

Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Subgroup 2 – Continued			h_{FE2}			
Forward-current transfer ratio	3076	V_{CE} = 5 V dc I_C = 5.0 A dc; pulsed (see 4.5.1). R_{B2E} = 100 ohms				
2N6350, 2N6352				2,000	10,000	
2N6351, 2N6353				1,000	10,000	
Forward-current transfer ratio	3076	V_{CE} = 5 V dc I_C = 10 A dc; pulsed (see 4.5.1). R_{B2E} = 100 ohms	h_{FE3}			
2N6350, 2N6352				400		
2N6351, 2N6353				200		
Subgroup 3						
High temperature operation:		T_A = +150°C				
Collector to emitter cutoff current	3041	Bias condition A V_{EB1} = 2 V dc; R_{B2E} = 100 ohms	I_{CEX2}			
2N6350, 2N6352		V_{CE} = 80 V dc			1.0	mA dc
2N6351, 2N6353		V_{CE} = 150 V dc			1.0	mA dc
Low temperature operation:		T_A = -65°C				
Forward-current transfer ratio	3076	V_{CE} = 5 V dc I_C = 5.0 A dc, pulsed (see 4.5.1) R_{B2E} = 100 ohms	h_{FE4}			
2N6350, 2N6352				400		
2N6351, 2N6353				200		
Subgroup 4						
Small-signal short-circuit forward-current transfer ratio	3306	V_{CE} = 10 V dc, I_C = 1.0 A dc f = 10 MHz, R_{B2E} = 100 ohms	$\|h_{fe}\|$	5	25	
Open circuit output Capacitance	3236	V_{CB1} = 10 V dc; 100 kHz ≤ f ≤ 1 MHz, base 2 open	C_{obo}		120	pF

See footnote at end of table.

TABLE I. Group A inspection - Continued.

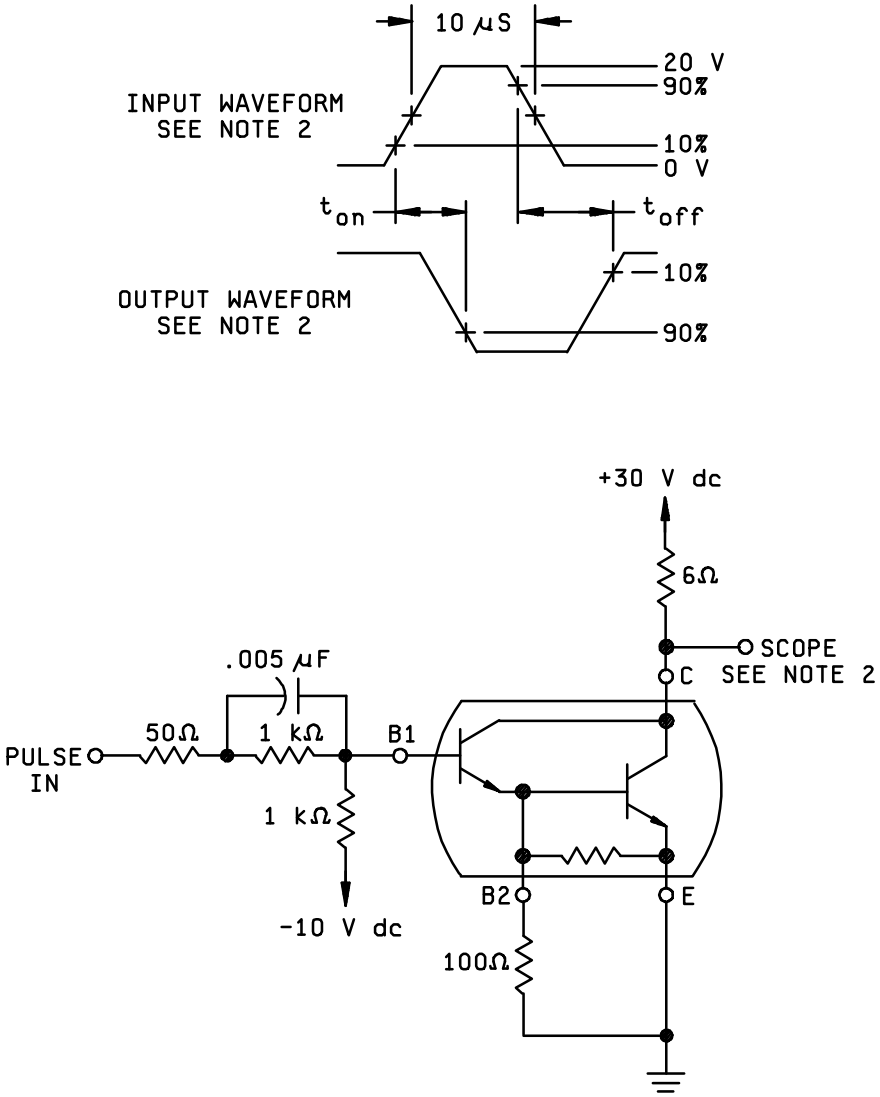
Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Subgroup 4 - Continued.						
Pulse response						
Turn-on time	3251	Test condition A, V_{CC} = 30 V dc I_C = 5.0 A dc	t_{on}			
2N6350, 2N6352 2N6351, 2N6353		See figure 4 See figure 5.			0.5 0.5	µs µs
Turn-off time	3251	Test condition A, V_{CC} = 30 V dc I_C = 5.0 A dc	t_{off}			
2N6350, 2N6352 2N6351, 2N6353		See figure 4 See figure 5.			1.2 1.2	µs µs
Subgroup 5						
Safe operating area (continuous dc) (for types 2N6350 and 2N6351 only)	3053	T_C = +100°C; t ≥ 1.0 s, 1 cycle $t_r + t_f$ = 10 µs (see figure 6) R_{B2E} = 100 ohms				
Test 1 (2N6350, 2N6351)		V_{CE} = 1.5 V dc; I_C = 3.3 A dc				
Test 2 (2N6350, 2N6351)		V_{CE} = 30 V dc; I_C = 167 mA dc				
Test 3 (2N6350)		V_{CE} = 80 V dc; I_C = 35 mA dc				
Test 4 (2N6351)		V_{CE} = 150 V dc; I_C = 13 mA dc				

See footnote at end of table.

TABLE I. Group A inspection - Continued.

Inspection 1/	MIL-STD-750		Symbol	Limits		Unit
	Method	Conditions		Min	Max	
Subgroup 5 - Continued.						
Safe operating area (continuous dc) (for types 2N6352 and 2N6353 only)	3053	T_C = +100°C; t ≥ 1.0 s, 1 cycle $t_r + t_f$ = 10 µs (see figure 7) R_{B2E} = 100 ohms				
Test 1 (2N6352, 2N6353)		V_{CE} = 5.0 V dc; I_C = 5 A dc				
Test 2 (2N6352, 2N6353)		V_{CE} = 10 V dc; I_C = 2.5 mA dc				
Test 3 (2N6352)		V_{CE} = 80 V dc; I_C = 95 mA dc				
Test 4 (2N6353)		V_{CE} = 150 V dc; I_C = 35 mA dc				
Electrical measurements		See table I, Subgroup 2.				
Safe operating area (switching)	3053	Load condition B (clamped inductive load) See figure 9. T_A = + 100°C, $t_r + t_f \leq 1.0$ µs, duty cycle ≤ 2 percent; t_p = 8 ms (vary to obtain I_C) R_s = 0.1 Ω; R_{BB1} = 200 Ω, V_{BB1} = 10 V dc, R_{BB2} = 2.2 kΩ, V_{BB2} = -4 V dc, I_C = 5 A dc, V_{CC} = 25 V dc; $R_L \leq 2.5$ Ω, L = 40 mH (Triad c-48U, or equivalent), R_{B2E} = 100 Ω				
2N6350, 2N6352		Clamp voltage = 50 +0, -5 V dc				
2N6351, 2N6353		Clamp voltage = 90 +0, -5 V dc				
Electrical measurements		See table I, subgroup 2				

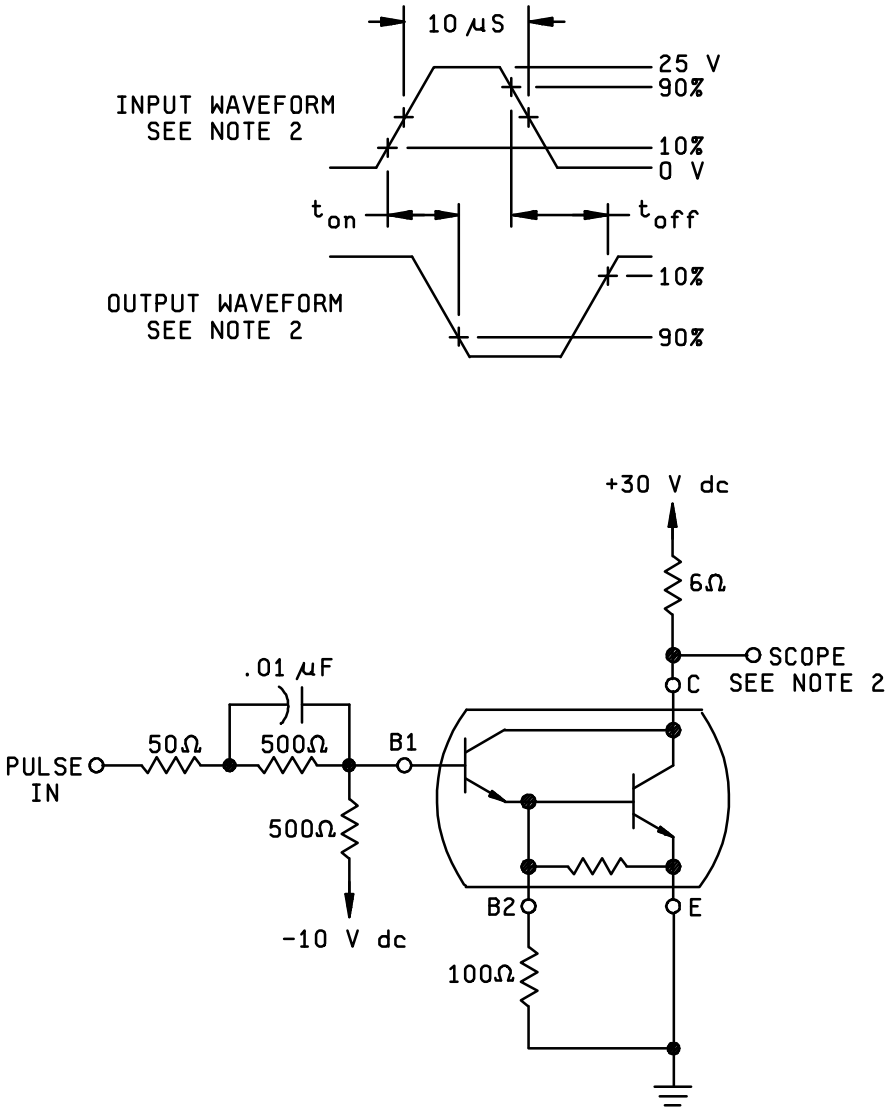
1/ For sampling plan, see MIL-PRF-19500.



NOTES:

1. The input waveform is supplied by a pulse generator with the following characteristics: $t_r \leq 15$ ns, $t_f \leq 15$ ns, $Z_{Out} = 50\ \Omega$, PW = 10 µs, duty cycle ≤ 2 percent.
2. Output waveforms are monitored on an oscilloscope with the following charactersticics: $t_r \leq 15$ ns, $Z_{in} \geq 10\ M\Omega$, $C_{in} \leq 11.5$ pf.
3. Resistors shall be noninductive types.
4. The DC power supplies may require additional by-passing in order to minimize ringing.

FIGURE 4. Pulse response test circuit for 2N6350 and 2N6352.



NOTES:

1. The input waveform is supplied by a pulse generator with the following characteristics: $t_r \leq 15$ ns, $t_f \leq 15$ ns, $Z_{Out} = 50\ \Omega$, PW = 10 µs, duty cycle ≤ 2 percent.
2. Output waveforms are monitored on an oscilloscope with the following charactersticics: $t_r \leq 15$ ns, $Z_{in} \geq 10\ M\Omega$, $C_{in} \leq 11.5$ pf.
3. Resistors shall be noninductive types.
4. The DC power supplies may require additional by-passing in order to minimize ringing.

FIGURE 5. Pulse response test circuit for 2N6351 and 2N6353.

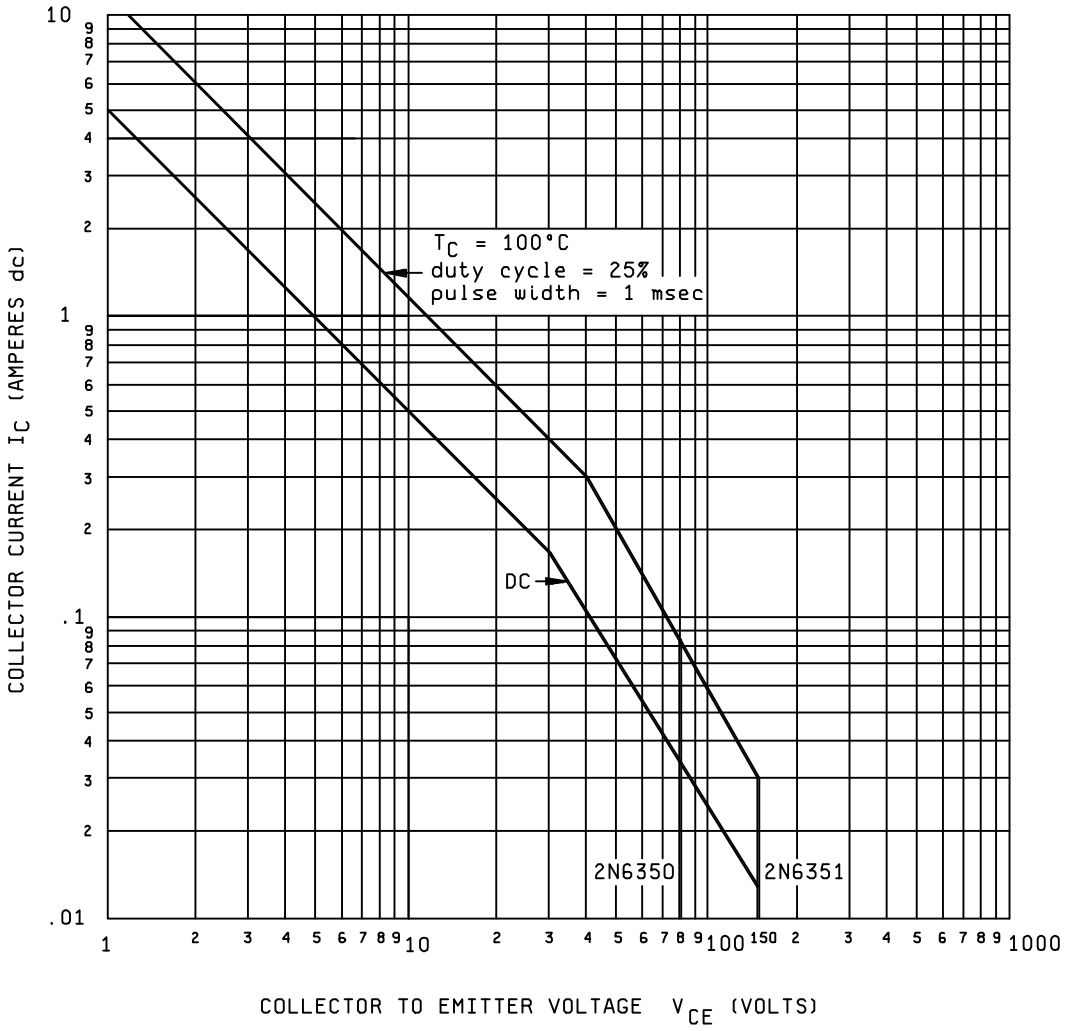


FIGURE 6. Maximum safe operating area graph for types 2N6350 and 2N6351.

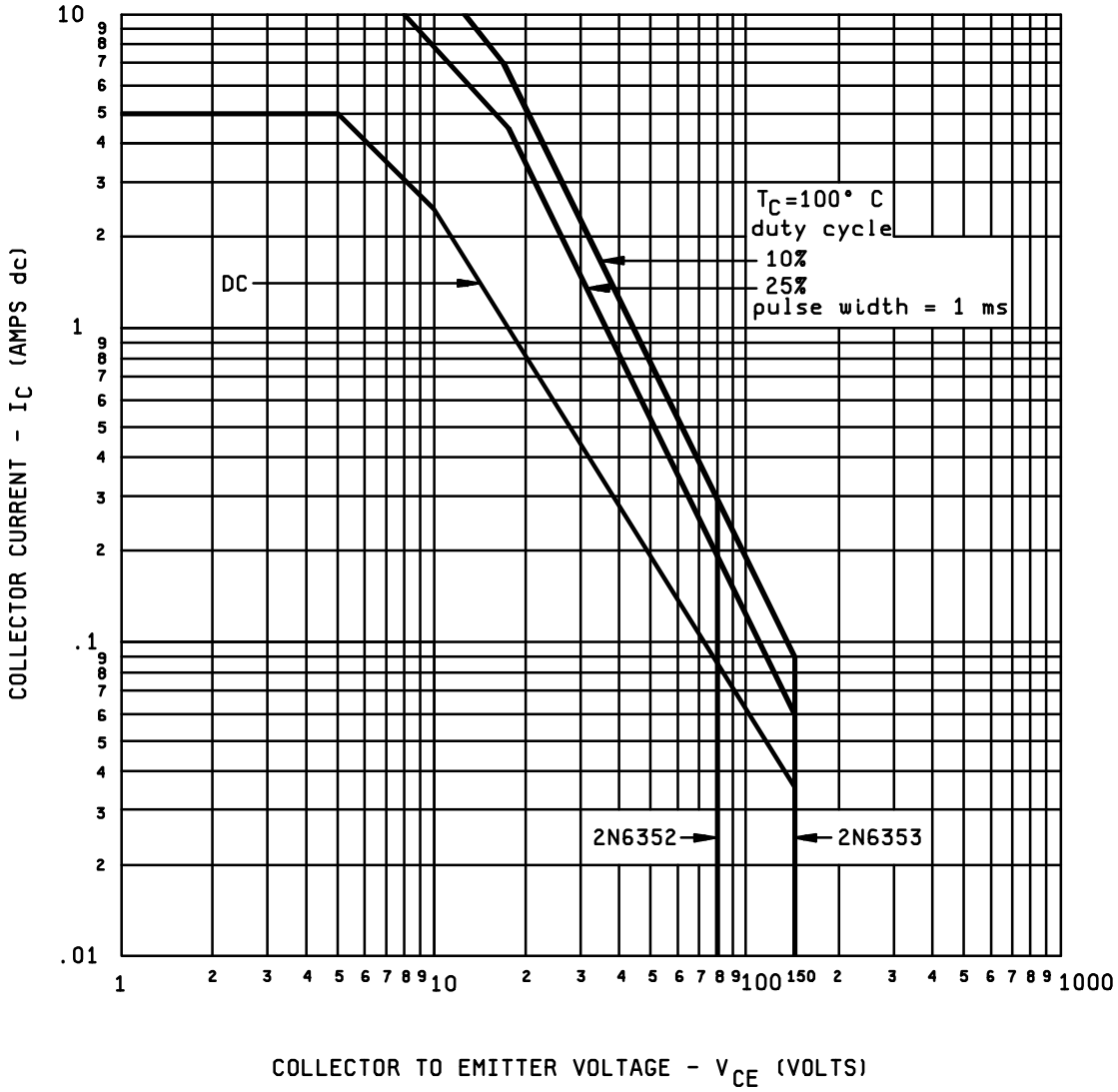


FIGURE 7. Maximum safe operating area graph for types 2N6352 and 2N6353.

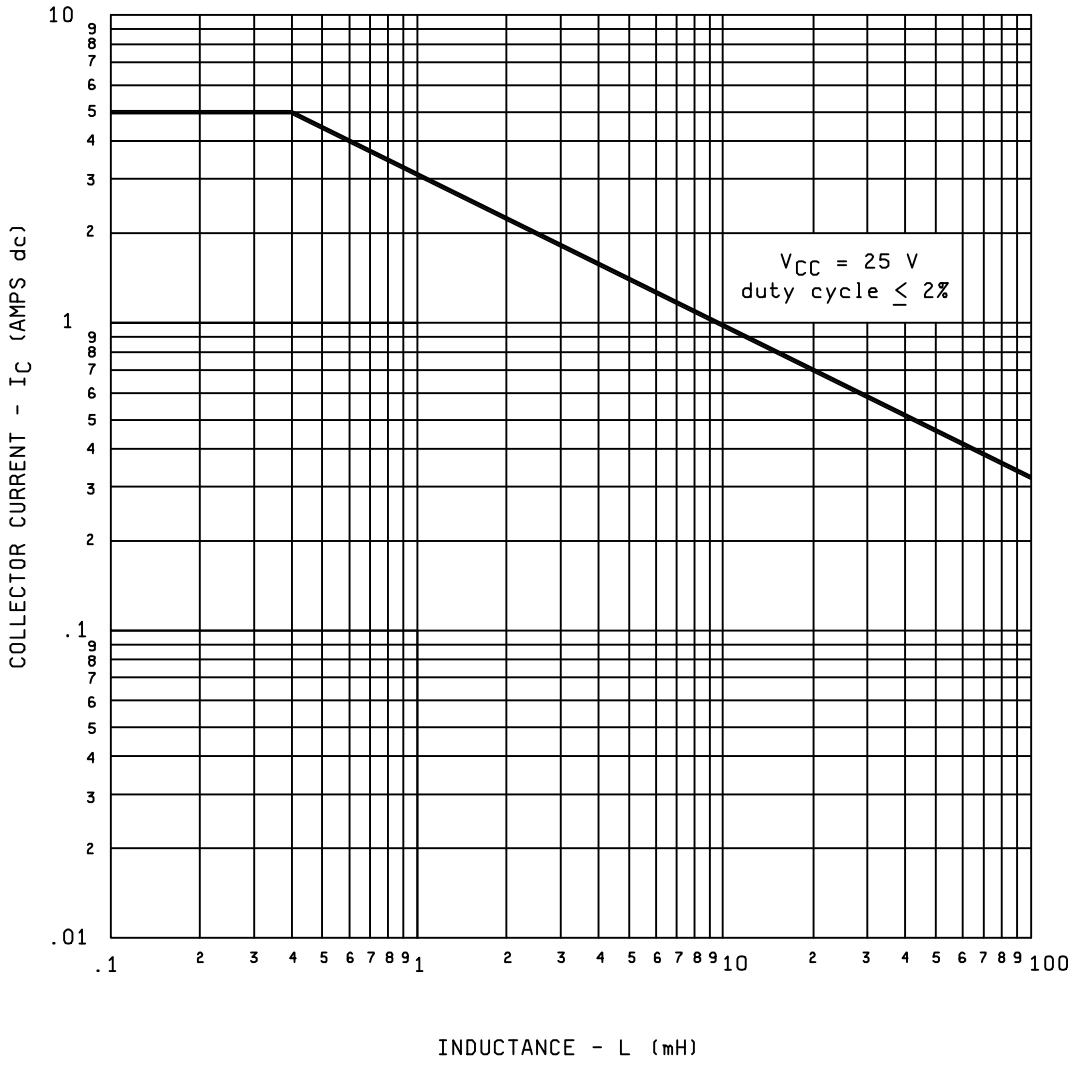


FIGURE 8. Safe operating area for switching between saturation and cutoff – (unclamped inductive load).

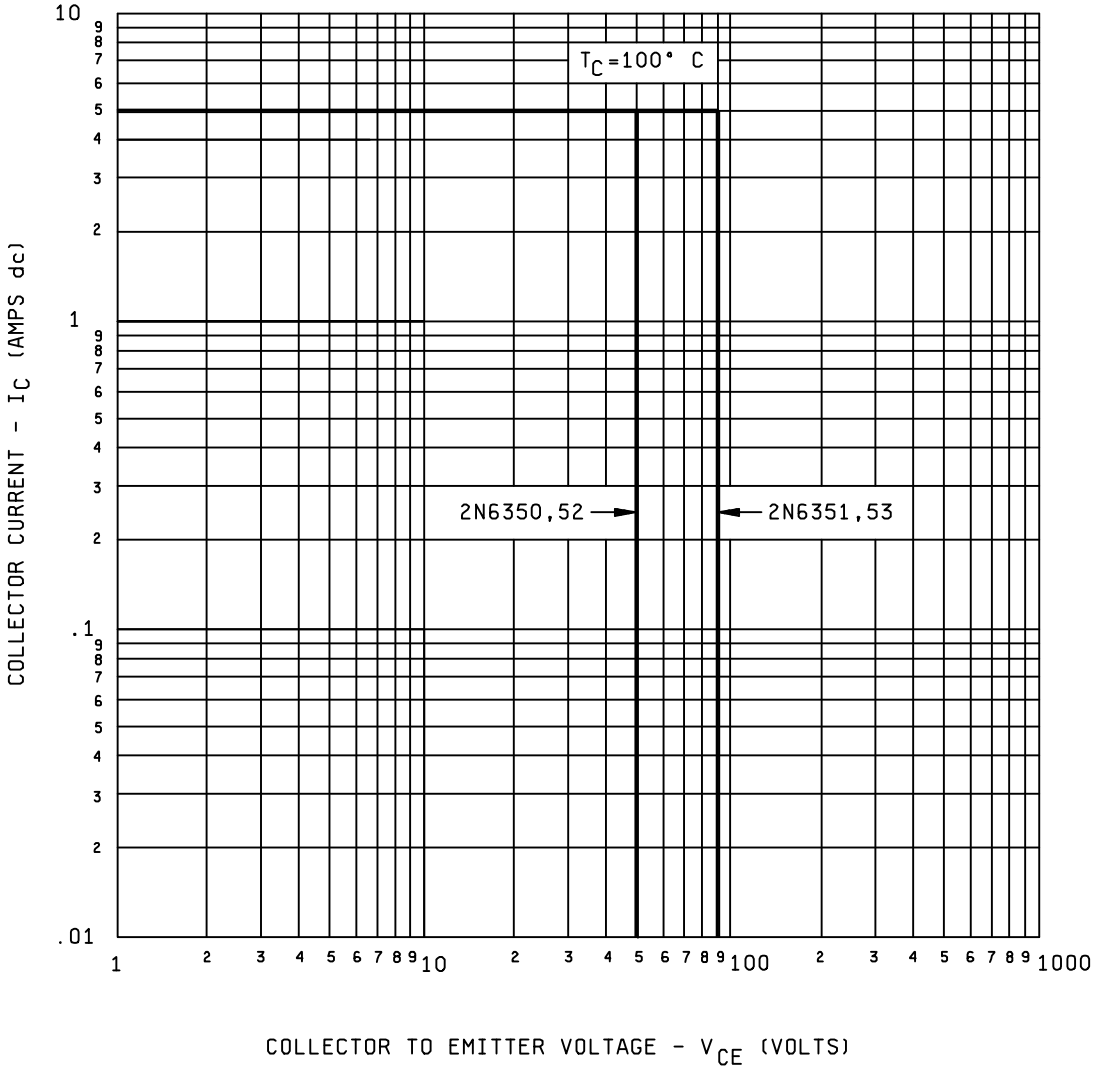


FIGURE 9. Safe operating area for switching between saturation and cutoff – (clamped inductive load).

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Points' packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

5.2 Mechanical damage. Packaging shall prevent mechanical damage of the devices during shipping and handling and shall not be detrimental to the device.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The notes specified in MIL-PRF-19500 are applicable to this specification.

6.2 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number, and date of this specification.

b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2.1).

c. The lead finish as specified (see 3.4.1).

d. Type designation and quality assurance level.

e. Packaging requirements (see 5.1).

6.3 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Manufacturer’s List QML No.19500 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from Defense Supply Center, Columbus, ATTN: DSCC-VQE, P.O. Box 3990, Columbus, OH 43216-5000.

6.4 Suppliers of JANHC and JANKC die. The qualified die suppliers with the applicable letter version (example, JANHCA2N6350) will be identified on the QML.

JANC ordering information			
PIN	Manufacturers		
	43611		
2N6350	JANHCA2N6350 JANKCA2N6350		

6.5 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodian:
Army - CR
Navy - EC
NASA – NA
DLA - CC

Review activities:
Army - AV

Preparing activity:
DLA - CC

(Project 5961-2301)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.

2. The submitter of this form must complete blocks 4, 5, 6, and 7.

3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-PRF-19500/472B	2. DOCUMENT DATE 000710

3. **DOCUMENT TITLE**
SEMICONDUCTOR DEVICE, DARLINGTON TRANSISTOR, NPN, SILICON, POWER TYPES 2N6350, 2N6351, 2N6352 AND 2N6353 JAN, JANTX, JANTXV, JANHC AND JANKC

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle initial)	b. ORGANIZATION	
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Include Area Code) COMMERCIAL DSN FAX EMAIL	7. DATE SUBMITTED

8. PREPARING ACTIVITY

a. Point of Contact Alan Barone	b. TELEPHONE Commercial DSN FAX EMAIL 614-692-0510 850-0510 614-692-6939 alan_barone@dscc.dla.mil
c. ADDRESS Defense Supply Center Columbus, ATTN: DSCC-VAC, 3990 East Broad Street, Columbus, OH 43213-1199	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Standardization Program Office (DLSC-LM) 8725 John J. Kingman, Suite 2533, Fort Belvoir, VA 22060-6221 Telephone (703) 767-6888 DSN 427-6888